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    Attorney for Plaintiff,
7   ROBERT MILLER

8                **UNITED STATES DISTRICT COURT**
9                   **DISTRICT OF NEVADA**
                    **LAS VEGAS DIVISION**
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11  ROBERT MILLER,                          Case No. 2:18-cv-02097-JAD-VCF

12
                          Plaintiff,
13                                          **DECLARATION OF JASON
                                            DORA IN SUPPORT OF
14  v.                                      MOTION TO DISMISS
                                            COUNTERCLAIMS**
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    4INTERNET, LLC; and DOES 1 through      *Oral Argument Requested*
16  10 inclusive,

17
                          Defendants.
18  AND

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    4INTERNET, LLC,
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                          Counterclaimant,
21

22  v.

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    ROBERT MILLER; MATHEW HIGBEE;
24  THE LAW FIRM OF HIGBEE &
    ASSOCIATES, APC; and CHRISTOPHER
25  SADOWSKI;

26
                          Counterclaim
27  Defendants.

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**DECLARATION OF JASON DORA IN SUPPORT OF
MOTION TO DISMISS COUNTERCLAIMS**

I, Jason Dora, declare as follows:

1.      I have personal knowledge of the following facts, and if called as a witness, I could and would testify as follows:

2.      Professionally, I've been involved with software development for over 20 years.  I went to Cal State Fullerton and received a Certification in Software Engineering.  I taught computer classes for programming, web development, and Adobe Photoshop for UCLA under their IMMEX program.

3.      I am currently employed by Higbee & Associates as a Computer Systems Manager and have been here since November 2019.

4.      I have reviewed the Amended Counterclaims filed by 4Internet LLC and can offer my neutral impressions as follows:

5.      "Cloud" computing is a marketing term used to describe remote resources / IaaS [Infrastructure-as-a-Service], often implying resources are rented from another party; where many people share time with the same physical hardware.  For example, "[o]ur web server is in the Amazon cloud" should be read as "we rent part of a server owned and managed by Amazon to host our website."

6.      Full-stack development typically means you are sufficiently well versed enough to work on all problems related to front-end or back-end technologies.  Front-end referring to what end-users interact with, such as using PHP/Angular JS to generate HTML to create a website user interface.  While back-end often referring to things like the MySQL/MongoDB database to store information or configuring the Apache/Nginx/Node.js webserver to send the generated HTML over the network to an end-user.

7.      Privately hosted servers generally refer to resources with exclusive use, as in the case where the server is owned by the person operating it or where a portion of the server hardware is reserved exclusively for use by a user (such as the case with VPS = Virtual Private Servers).

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8.      With respect to 4Internet's server, in connecting to 4search.com and looking at the HTTP headers I see that the server reports that it belongs to CloudFlare. Additionally, the DNS nameservers currently registered with the 4search.com domain are dan.ns.cloudflare.com and uma.ns.cloudflare.com.

9.      CloudFlare is a large cloud computing platform that gained notoriety with their services for mitigating a distributed denial of service (DDOS) attacks.  They have four service levels based on usage, one of which is a free tier that provides unlimited DDOS protection.

10.     Looking at the historical DNS records on securitytrails.com, I see that 4search.com has been using the CloudFlare services since 2016-07-15, prior to that the domain was pointed at IP addresses belonging to Comcast Cable Communications, LLC since 2014-08-17, and before that servers belonging to Leaseweb USA, Inc. since 2009-11-15.  A spreadsheet breaking down the historical DNS records for 4search.com, showing the dates and service providers is attached hereto as Exhibit B.

11.     Leaseweb and Cloudflare are two large cloud computing providers. According to the Cloudflare website they handle "visits from over 1 billion unique IP addresses."  Additionally, Cloudflare offers multiple 100% uptime Service Level Agreements, one of which involves actively crawling their customer's website to create a cached version for use if the server goes offline.  CloudFlare also offers various uptime insurance options including a 25x reimbursement.

12.     As opposed to privately hosted servers, most websites are hosted in shared environments, such as cloud services, where hundreds (if not thousands) of domains are served by the same physical hardware, as this is the cheapest option.  The two most common web servers today are Apache and Ngnix, and when configured correctly they can serve thousands of requests a second.

13.     The downside of a privately hosted server is not sharing the cost with other users; but that also means more resources are dedicated to whatever you want.

14.     All search engines such as Google and Yahoo crawl the web for content.  They discover new websites through updates published in the DNS system or from page links.   The information they see on pages is used to create search indexes. Depending on how popular the search results are (based on their own user's clicks) the search engine will refresh their indexes by crawling the site again.  This might be every couple minutes (as with news sites), or days or weeks with less popular sites.

15.     Having your website crawled is often very desirable, as it means your website will appear higher in the search rankings of search engines.  Because of that, there are whole Search Engine Optimization ("SEO") industries built up around trying to increase the amount of search engine crawling.

16.     "Azure" is a Microsoft's brand name for their Cloud computing service.  Other large Cloud computing providers are: AWS [Amazon Web Services], GCP [Google Cloud Platform], Cloudflare, Rackspace Cloud, etc.

17.     "Bing" is the brand name for Microsoft's search engine.  Its index is also used by smaller search engine providers such as Yahoo and DuckDuckGo.  According to the Bing website: they say that it belongs to one of their crawlers, one that creates snapshots of websites and is used in their image search engine.

18.     Open source programming is software where the source code is released so that users can review, modify and distribute their own versions of the software to anyone or for any purpose.  It is the antithesis of proprietary software, and is very commonly used.

19.     Code itself is a set of instructions that tell a computer to perform an action. There are numerous types of resources available to a computer (disk, RAM, network, etc.) depending on what the code is doing; all or none of them might be used to some extent.

20.     System resources are there for the system to use.  Some forms of wear may or may not occur depending on the resource in question and how the server operator has things configured.  Actual "damages" could occur if the server was instructed to do

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so, but it's generally accepted that simply having a computer powered on causes wear during its normal operation.

21.    A server outage means a server is no longer responding to requests possibly because it is powered off or something else is happening.  The ways in which a server outage can take effect such as through a shutdown, an inaccessible site, or power outage, are innumerable.

22.    Slowdowns can be caused by a number of factors, but the meaning generally describes when a server takes longer than expected to respond to requests.

23.    A slowdown is technically a form of an outage.  However, if all requests are still being fulfilled, then a slowdown is not an outage.  Although, if a client leaves after a reasonable amount of time has elapsed before having their request fulfilled, then that can be construed as an outage.

24.    A slowdown can last for however long the server is slow or not responding to requests.

25.    The time it would take to fix the slowdown or server outage described by 4Internet LLC is difficult to assess.  The facts in the Amended Counterclaim seem to describe situations where the web server allegedly received 11, 15, or 8, etc. visits a day from Higbee & Associates and/or CopyPants or Image Defenders.  A normal web server can typically serve thousands of requests a second, where the visits described would not even be perceptible.  Either way, spending over a thousand hours seems excessive and unrealistic based on my professional opinion.

26.    Although the typical rate for a developer would vary depending on their work and skill level, in the State of Nevada, the typical rate for a web software developer is $30.14 per hour.    *See*    https://www1.salary.com/NV/Las-Vegas/Software%20Developer%20I-salary.html.   Outsourcing the task of fixing a slowdown or server outage to a developer overseas would also guarantee a lower rate.

27.    A "denial of service" ("DoS") attack is one in which an attacker makes many

1  requests to server to cause a large amount of work.  A "DDoS" attack on the other

2  hand, is a distributed denial of service using many attackers.  The attackers often

3  ignore, drop, or re-direct the responses from the server to avoid causing a load on

4  themselves.

5  28.     A denial of service is typically caused by asking the server to form a TCP

6  handshake, or when an IP network makes a connection between server and client,

7  and re-directing the traffic somewhere else.  It can also be caused by using the

8  Network Time Protocol, requesting large amounts of time updates and redirecting the

9  response to a victim.

10  29.     It is in fact easy to cause denial of service due to the way TCP/IP networking

11  works.  It is easy to make many requests and have them re-directed to endpoints.

12  30.     A denial of service can last as long as the attacker continues to exploit the

13  network: seconds, days, hours, weeks.

14  31.     A DoS attack can be prevented in a cost-effective manner.  Many operating

15  systems and off the shelf firewall now have measures built-in to react to various

16  types of DoS attacks.

17  32.     Scraping (spiders/indexers/bots) generally refer to the process of having a

18  computer navigate to a web server and save a local copy of a response to their disk

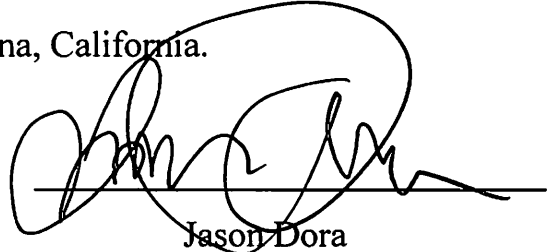19  instead of displaying it in a web browser.

20  33.     Scraping uses the same processes as normal end-user web traffic, but a web

21  scraper generally uses much less system resources.  Since they are not displaying

22  anything they don't download any images, JavaScript files, fonts, icons, etc. that

23  make up the full web page when displayed in a normal web browser.

24  34.     Based on my review of the graphs provided by 4Internet in its Amended

25  Counterclaim, the server in question went offline for a number of days because it

26  received 8.89 page views per second (1,600 page views over 3 hours).  However, the

27  same graphs show traffic at or above those levels both before and after the areas

28  highlighted     and     marked     as     visits     from     Higbee     &     Associates.

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1    I declare under penalty of perjury that the foregoing is true and correct under

2  the laws of the United States of America.

3    Executed on February 7, 2020 at Santa Ana, California.

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6                                    Jason Dora

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